Novatech
Loadcell Design & Manufacture

F255 Miniature Diaphragm Loadcell

Standard Ranges 100, 200, 400, 800N and 1.6, 3.2 and 6.4kN (10 to 640kgf)

- Tension / compression / bi-directional calibration
- Easy installation
- Standard 1 year warranty
- Sealed to IP65
- Hardened stainless steel construction
- Traceable calibration with certificate included in the standard price

Specification

Parameter	Value	Unit
Non-linearity - Terminal	±0.5	% RL
Hysteresis	±0.5	% RL
Creep - 20 minutes	±0.1	% AL
Repeatability	±0.1	% RL
Rated output - Nominal	1.6	mV/V
Rated output - Rationalised	1.0	mV/V
Rationalisation tolerance (applies to single direction calibrations)	±0.5	% RL
Zero load output	±4	% RL
Temperature effect on rated output per Â°C	±0.005	% AL
Temperature effect on zero load output per Â°C	±0.03	% RL
Temperature range - Compensated	-10 to +50	°C
Temperature range - Safe	-10 to +80	°C
Excitation voltage - Recommended	10	V

Excitation voltage - Maximum	10	V
Bridge resistance	350	Î©
Insulation resistance - Minimum at 50Vdc	500	MÎ©
Overload - Safe	50	% RL
Overload - Ultimate	100	% RL
Sealing	IP65	

F255 Miniature Diaphragm Loadcell. Geometry: Very small loadbutton cell for force measurement in confined spaces. Used in compression and/or tension on a wide range of OEM or end-user applications.

With bi-directional versions there is a small difference between the output signal for compression and tension. All standard bi-directional loadcells are calibrated in both modes and the output for each direction is stated on the test / calibration certificate. The F255 is ideally suited to force measurements in confined spaces in both tension and compression for control of critical parameters in all kinds of industrial processes. Their versatility is such that they are also applied in a great number of important fields of scientific and engineering test work, mobile as well as workshop, static and dynamic. We are happy to design variants of this loadcell to meet your specific requirements. Versions can be manufactured for operation up to +250°C. Please consult our engineering department.

Order Codes

Code	Description
F255CFR0H0	Compression, IP65, unrationalised
F255TFR0H0	Tension, IP65, unrationalised
F255UFR0H0	Bi-directional, IP65, unrationalised
F255CFR0HN	Compression, IP65, rationalised
F255TFR0HN	Tension, IP65, rationalised
F255UFR0HN	Bi-directional, IP65, rationalised
Change the C to a D for compression with stud fitting both ends.	

Structural Stiffness - Nominal

Range (kN)	Stiffness (N/m)
100 (N)	3.5 x 106
200 (N)	7.1 x 106
400 (N)	1.4 x 107
800 (N)	2.8 x 107
1.6	5.6 x 107
3.2	1.1 x 108
6.4	2.2 x 108

Notes

- AL = Applied load.
- RL = Rated load.
- Temperature coefficients apply over the compensated range.
- The load must be applied directly through the central loading axis.

Connections

The loadcell is fitted with 2 metres of PVC insulated 4 core screened cable type 7-1-4C.

Excitation + = Red, Excitation - = Blue, Signal + = Yellow, Signal - = Green, Screen = Orange.

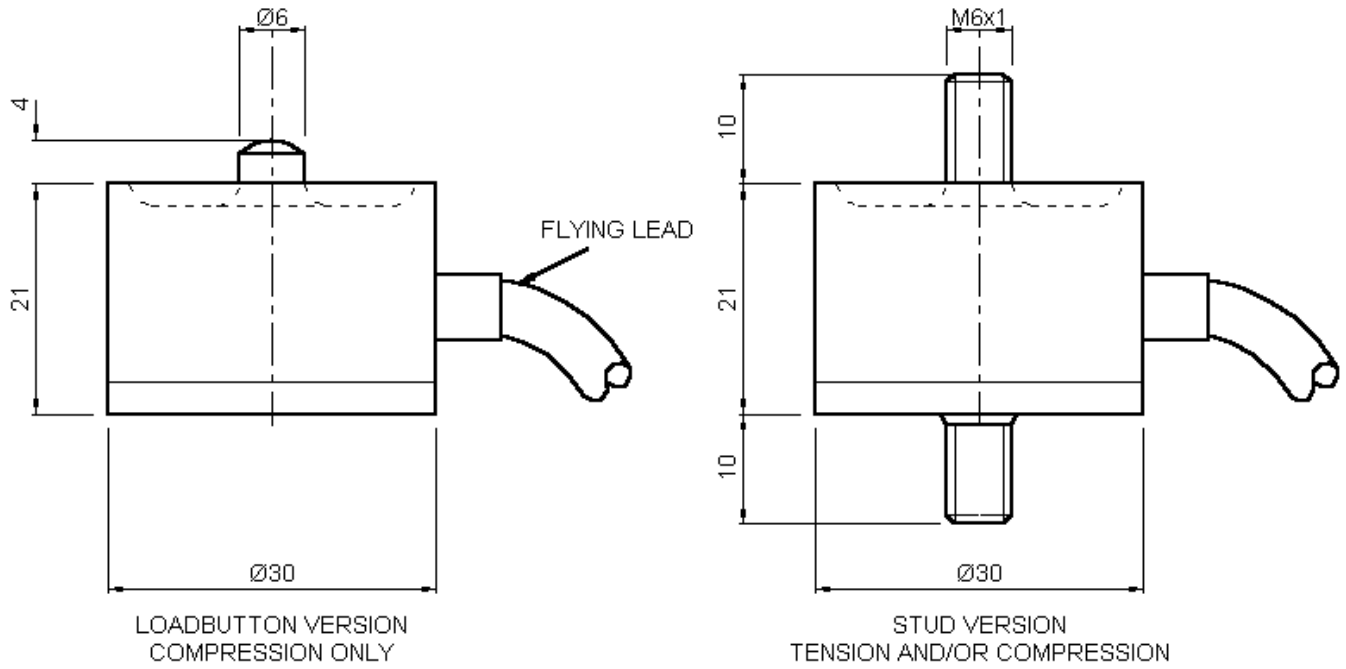
Reverse the signal connections to obtain a positive signal in tension mode. The screen is not connected to the loadcell body.

When this loadcell is rationalised the resistors are housed in a capsule located in the loadcell cable 100mm from the free end. Capsule dimensions are Ø10mm by 57mm.

Files

Type	Title	Download
STEP File	F255CFR0H0 All standard ranges	Download
STEP File	F255-T/D/U-FR0H0 All standard ranges	Download

Outline



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